

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number
WO 2004/045517 A2

- (51) International Patent Classification⁷: **A61K**
- (21) International Application Number:
PCT/US2003/036317
- (22) International Filing Date:
12 November 2003 (12.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/426,545 15 November 2002 (15.11.2002) US
60/445,417 5 February 2003 (05.02.2003) US
- (71) Applicant (for all designated States except US): **THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES** [US/US]; National Institutes Of Health, Office of Technology Transfer, 6011 Executive Boulevard, Suite 325, Rockville, MD 20852-3804 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **FINKEL, Toren** [US/US]; 5011 Del Ray Avenue, Bethesda, MD 20814 (US). **QUYYUMI, Arshed, A.** [US/US]; 3478 Valley Road, N.W., Atlanta, GA 30305 (US). **HILL, Jonathan, M.** [GB/GB]; 132 Woodwarde Road, Dulwich, London SE22 SUR (GB).
- (74) Agent: **SIEGEL, Susan, Alpert; Klarquist, Sparkman, LLP**, One World Trade Center, Suite 1600, 121 SW Salmon Street, Portland, OR 97204 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declaration under Rule 4.17:**
— of inventorship (Rule 4.17(iv)) for US only
- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/045517 A2

(54) Title: **METHOD FOR THE DIAGNOSIS AND TREATMENT OF VASCULAR DISEASE**

(57) Abstract: A method for diagnosing decreased vascular function is disclosed. The method includes assaying the number of endothelial progenitor cells. A method for detecting increased cardiovascular risk is also disclosed, as is a method diagnosing atherosclerosis. In one example, the methods include assaying the number of endothelial progenitor cells. A method for treating a subject with decreased vascular function is disclosed. The method includes administering a therapeutically effective amount of endothelial progenitor cells to the subject. In one embodiment, the subject has atherosclerosis.